[redacted] 25X1

25X1 [redacted]

Ref: 552-OD-178

31 March 1964

[redacted] 25X1

Subject: Proposed Program for Construction of Breadboard System of an Automatic Stereo Correlation and Evaluation of the Performance Capabilities in such a system

Reference: (A) [redacted] MSC dated February 1964 (2) 25X1

Enclosure: (A) [redacted] Cost Analysis for this proposed study 25X1

Gentlemen:

Reference A, is a proposal for an Automatic Stereo Correlation Product Improvement as applicable to the Model 552 Viewer which was previously submitted on February 28, 1964. Attached herewith, as Enclosure A, is a cost sheet for an evaluation program which would entail construction and evaluation of an engineering breadboard Stereo Correlator. The result of this program would be the operational breadboard and a final report which would detail performance parameters of such a system which might be procurred for inclusion in future viewing systems.

[redacted] proposes to manufacture a breadboard and to conduct sufficient tests to determine the performance capabilities inherent in such a system as is described in Reference A. The proposed breadboard will contain the following: 25X1

A stereo viewing system which consists of two (2) independent optical systems; one for the right eye and one for the left eye. The right channel would be completely automatic with motorized drives. The left channel would be manually controlled by the operator. As the operator scans the film by moving the left X and Y axis drives, the motorized right channel would automatically follow such that stereo correlation would be maintained.

The right channel consists of the following items:

a) A film holder and illuminating light
b) X-axis and Y-axis motorized drives, with dial readout to indicate the amount of motion in these axes.

c) A fiber optics cable transmitting the image from the viewed film onto the eyepiece. The optical system of the objective is similar to the Model 552 Viewer System containing an interchangeable objective, a Bausch & Lomb zoom lens, and field lenses. The image from the fiber optics cable is viewed by an eyepiece, after some of the light is diverted to a scanning disc through a beamsplitter. The fiber optics cable can be rotated through a motorized drive to allow change of orientation (Θ). The zoom lens is provided with a motorized motion to allow change of magnification (M).

The left channel contains the following items:

a) A film holder and illuminating light source
b) A manual X and Y motion allowing manual scanning. This is achieved by a microscope type stage.
c) A direct viewing optical system to transmit the image from the film onto the left eyepiece. A beamsplitter is provided to direct some of the illumination onto the scanning disc.

A scanning disc is provided to simultaneously scan the right and left formats, with associated optical systems. Photomultipliers with associated circuits are provided for photoelectric sensing. Phototransistor gate sensing detectors are supplied to sense the phase and determine the direction of error.

The electronic preamplifier, amplifiers, power supplies, and controlled circuits are rack mounted.

The program will be conducted in accordance with the following plan. Based on the analysis work which has been accomplished at [redacted] the design parameters will be established and design of the breadboard will start. As various portions of the breadboard design are completed progressive release will be made to the shop where highly skilled technicians will be used for fabrication and assembly work. It is anticipated that the basic breadboard development will require both engineering and technician level personnel to modify it to an operational configuration. When the breadboard has reached an operational configuration, tests will be conducted an optimization of the system performance will be included as part of the evaluation program. The data collected from the evaluation test program will be analyzed to determine if the state of the art would allow greater performance than that obtained with the breadboard which was constructed. Based on this work, a final report will be written which will include both actual test results and predicted probable performance of an operational system. 25X1

The firm fixed price quotation for this program is [redacted] which will remain valid for a period of 60 days from this date. The final report will be submitted to the customer eight (8) months after receipt of a contract. 25X1

It should be pointed out that it may be desirable, from the customer's standpoint, to launch into such a program as is proposed herein, on a cost reimbursement basis since this would allow greater latitude in revisions to to the task if such are desired. If there are any questions in relation to this quotation, please contact the undersigned.

Very truly yours,

[redacted]

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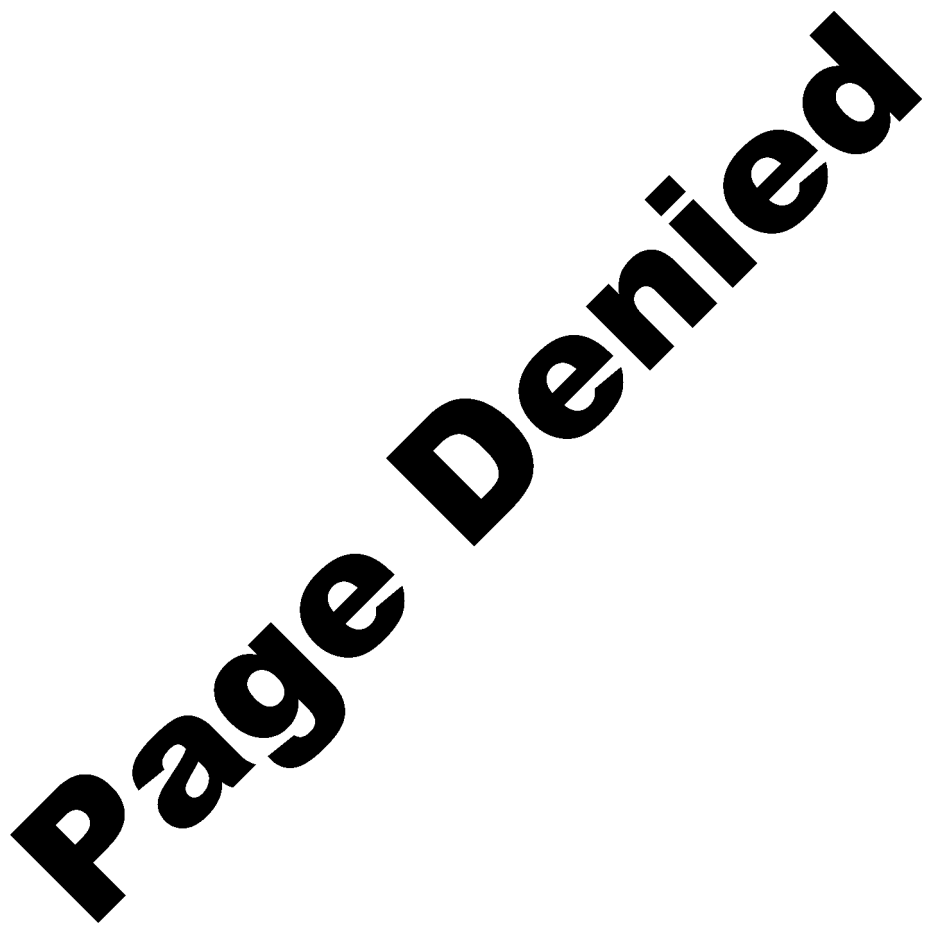
Vice President - Marketing

RJL/bjm



TRANSMITTAL SLIP	DATE 15 April 1964

TO:

ROOM NO.	BUILDING

REMARKS:

[redacted] will request [redacted] to send us a copy of Proposal #552MSC - Automatic Stereo Correlator (Proposed Product Improvement for Model 552 Viewer.

Two copies were received [redacted] has one copy and AS/LB/NPIC has the other copy which was sent with the minutes of the 9 April Meeting of the TDC.

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FROM:

ROOM NO.	BUILDING	EXTENSION

FORM NO. 241 1 FEB 55 REPLACES FORM 36-8 WHICH MAY BE USED. ☆ GPO : 1957—O-439445 (47)